

## ABSTRACT

[0099] A novel and useful acquisition and synchronization mechanism for spread spectrum communication systems whereby a synchronization sequence comprising a plurality of known symbols spaced apart by predefined time delay intervals is transmitted as the start of packet signal. At the transmitter, a synchronization sequence is transmitted at the beginning of each packet. A synchronization sequence is generated which includes a plurality of symbols with predefined time gaps between each of the symbols. Multiple synchronization sequences may be generated wherein each sequence comprises a unique set of time delays or gaps between each of the symbols. Each set of unique time delays or gaps between symbols of a sequence is stored as a synchronization sequence gap template in memory. When required to generate a synchronization sequence, the sequence generator outputs the plurality of synchronization symbols and inserts a specific time delay between each of the symbols in accordance with the contents of the gap template for the particular synchronization sequence.